

No one wins when disputes reach arbitration

Arbitration, like litigation, is an unpleasant experience for the parties involved. In most cases, reasonable people making reasonable compromises can settle disputes before arbitration is necessary.

An arbitration hearing I witnessed recently was no exception to this rule. The case, which involved an alleged roofing problem, could have been avoided and both the owner and the contractor would have come out ahead. Unfortunately, the parties couldn't come to an agreement and the issue had to be settled by a panel of three arbitrators. If there is a lesson to be learned from this event, it is that communication between the owner and contractor is vital if arbitration or litigation is to be avoided.

The case that finally reached the arbitration stage began in 1983, when the owner decided one of its buildings required a new roof. The owner's first step was to retain a consulting firm, which prepared contract documents that clearly and precisely specified the work to be done, the materials necessary and the application procedures from the award of the bid to the job's completion. The document defined 36 work items covering quality control, surface preparation, operational procedures, underlayment components, insulation, membrane components, sheet metal work, roof test sampling and special treatments.

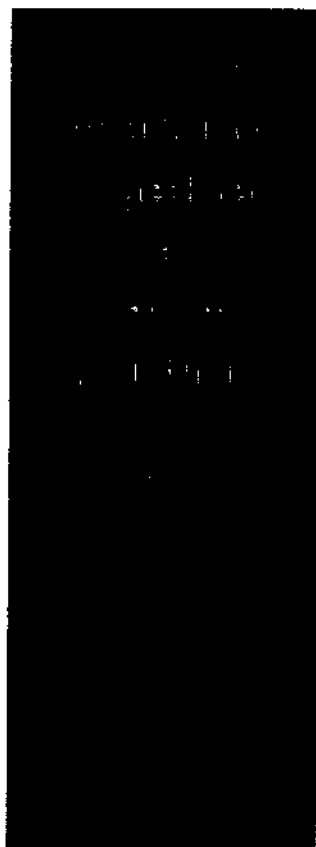
The project, as described by the documents, consisted of removing the two roofs that were on the building down to the lightweight concrete deck. The recover system the documents specified consisted of a two-ply asphalt/organic vapor retarder over which a layer of fiber glass insulation was mechanically fastened. A slag-surfaced, four-ply, coal tar bitumen membrane was to be applied over the insulation.

The documents also directed the contractor to appoint a quality controller, who would perform the duties outlined in the contract's quality assurance clause. Among the duties listed was the taking of roof samples to be analyzed in a laboratory designated by the owner. According to the document, an evaluation of the entire roof

would be based to a large extent on the results of these roof sample tests.

The contractor who submitted the successful bid for this job had been in business more than 25 years and was an NRCA contractor member as well as a member of one of NRCA's affiliates. The roofing firm had done several successful jobs for the owner in the past. In preparation for the project, the owner and contractor chose a well-known manufacturer as the material supplier and selected one of the manufacturer's published specifications for the membrane system to be installed. This specification became part of the contract documents' requirements.

The worker appointed by the contractor to serve as quality controller for the job was the project's foreman, a man with more than 20 years' experience. He had worked as foreman and quality controller on five previous jobs for the same owner. In his dual role as foreman and quality controller, the worker attended construction conferences, reviewed specifications, drawings and application requirements, and supervised the application process, according to his testimony at the arbitration hearing.



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Suggestions for owners and specifiers on avoiding arbitration:

- Select contract documents and manufacturers' specifications that contain reasonable requirements that can be attained using state-of-the-art application practices.
- Select reasonable and realistic application tolerances that can be attained using local application practices.
- Consider using NRCA's *Quality Control in the Application of Built-up Roofing*.
- Do not use quality control procedures that require laboratory analysis of test cut samples.
- If test cut sampling is required, use ASTM Procedure D-3617, "Sampling and Analysis of New Built-up Roofing Membranes."
- Select specifications commensurate with climate, structure and local application practices.
- Communicate clearly and candidly with your contractor regarding your expectations, requirements and penalties.
- Require and provide third-party inspection during application.
- Make your complaints and questions known to the contractor.
- Resolve on-the-job conflicts with contractors promptly and honestly.

Conflicting reports halt work

The owner assigned its own inspector on the job as well, although it was reported that this inspector visited the jobsite infrequently as the project progressed. In spite of his limited number of visits, he noted several contractual breaches, including unlabeled materials, failure to complete work started that day, exposed felts, failure to apply chalk lines to designate ply lines and other deficiencies in application techniques as defined in the contract documents.

The contractor's foreman/quality controller disagreed with these reports and assured the owner that quality materials were being applied in accordance with local roofing practices. The owner's representative continued to report jobsite problems, however. Finally, the situation deteriorated to the point where the owner ordered the contractor to halt operations.

With the work at a standstill, the owner called in the consulting firm that prepared the contract documents to examine the roof and provide advice. The decision was made to remove seven test cut samples. These were taken from roof areas selected by the consultant and analyzed by the owner's designated laboratory, which happened to be operated by the same consulting firm. The test results would determine the owner's next course of action.

After a 15-day wait, the test results were delivered to the owner. On the basis of these results the consultant and owner judged that the work was not in conformance with contract documents, and the contractor was ordered to remove and replace the roof.

The contractor, on the other hand, believed the job was satisfactory and would perform adequately for the intended service life. He was willing to back his belief with an extended roof warranty, but this failed to sway the owner, who continued to insist on a complete roof replacement. The contractor refused to perform the work and was dismissed from the job. Subsequently, the project was awarded to two other contractors who completed the roof.

Contractor turns to arbitration

After he was removed from the project, the contractor sought compensation for the work he had already completed. The owner failed to respond. Consequently, the contractor turned to the legal system for relief. The attorneys representing both parties agreed to settle the dispute through arbitration.

With arbitration pending, the owner retained a second consultant who examined the roof and took several test samples. They were analyzed by ASTM Method D-3617 as modified by the consultant. The second consultant's report was submitted as the test results and subsequently introduced by the owner as evidence at the hearings.

The actual hearings, which lasted about seven days, took place in the spring of 1986, two years after the contractor was dismissed. Hearing the testimony was a panel comprised of an attorney, an architect and an engineer. In my opinion, the

Suggestions for contractors on avoiding arbitration:

- Carefully read the contract documents and manufacturers' specifications.
- Do not bid on jobs where the contract document requirements cannot be met using local application practices.
- Do not bid on jobs whose contract documents require laboratory analysis of test samples to evaluate your application practices for quality control purposes.
- Prior to application, request in writing waivers on application tolerances that are unreasonable and impossible to meet.
- Encourage the use of NRCA's document *Quality Control in the Application of Built-up Roofing*.
- Learn and understand the tolerances, consequences and penalties associated with test cut sampling and analysis.
- Understand the role of the third-party consultants associated with your project.
- Inform the owner in writing of unexpected occurrences during application that are in conflict with contract documents.
- Resolve on-the-job difficulties with owners promptly and honestly.

arbitrators were experienced, distinguished, modest, perceptive, firm, fair and in command.

The contractor and owner called several witnesses to support their claims. The owner's key witnesses were its employees, its on-the-job inspector and its primary and secondary consultants. Testifying for the contractor were the firm's president, the foreman/quality controller and myself, acting as a technical consultant to the contractor's attorney and as an expert witness for the contractor.

Also introduced as evidence were the contract documents, the manufacturer's specifications, detailed drawings, samples of materials used, photographs and a screening of a videotape showing the complete installation of a similar roof system. In addition, the arbitrators took the opportunity to visit the jobsite and examine the roof in question, which was more than two years old at the time of this inspection.

The reports of the test sample analysis by the owners' two consultants were also introduced. Although several issues (some relevant and some not) arose during the hearings, the test sample results played a major part in the panel's decision.

Compliance questioned

The primary question the two sides debated at the hearings was whether or not the contractor complied with the requirements of both the contract documents and the manufacturer's specifications. Another related point of contention was the validity of the test sample results, and how it was affected by the sampling techniques, methods of analysis, biases and interpretations

involved. It appeared to me as I listened to the debate that the question of the roof's present and future performance was secondary.

The contractor argued against the validity of the test samples, claiming that the techniques used to obtain the samples were inadequate. He stated his belief that the seven 1-foot-square samples taken were not representative of the large roof area involved, and he asserted that the selection of the roof areas to be tested was biased because the samples were selected by the owner's consultant and sent to the consultant's lab for analysis. The owner responded to these charges by saying that it was the owner's prerogative to sample and test as stated in the contract document.

The contractor also challenged the method used to analyze the samples, claiming that there are no consensus procedures to evaluate new roof applications by laboratory test sample analysis. It was also pointed out to the panel that even if a method similar to ASTM Standard Method D-2829 "Sampling and Analysis of Built-Up Roofs" was used, the laboratory analysis may not have produced valid and repeatable results. The shortcomings of test method D-2829, which explicitly states that it is not to be used for new construction inspection, make it unsuitable for settling disputes, it was stated. One shortcoming cited was the fact that the precision of the individual test procedures contained in the standard has not been established. Another deficiency mentioned was the technical literature's lack of

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